



Mineral Industry Surveys

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VANADIUM IN JULY 1999

According to *Metal Bulletin*, U.S. ferrovanadium prices during July ranged from \$5.10 to \$5.25 per pound of vanadium content, compared with \$5.10 to \$5.25 in June. The range for European ferrovanadium prices was \$10.30 to \$10.60 per kilogram in July.

In June, European ferrovanadium prices ranged from \$10.40 to \$10.85. For vanadium pentoxide, the July range as published by *Metal Bulletin* was \$2.00 to \$2.13 per pound, while in June it was \$1.98 to \$2.20.

TABLE 1
U.S. CONSUMPTION AND CONSUMER STOCKS OF VANADIUM, BY FORM 1/

(Kilograms, contained vanadium)

	1998		1999			
	Consumption	Stocks	June		July	
			Consumption	Stocks r/	Consumption	Stocks
Ferrovandium 2/	4,010,000	302,000	284,000 r/	285,000	281,000	292,000
Vanadium-aluminum alloy	W	9,000	W	12,300	W	12,500
Other 3/	387,000	3,000	38,800 r/	9,190	38,300	9,410
Total	4,390,000	314,000	323,000 r/	306,000	319,000	314,000

r/ Revised. W Withheld to avoid disclosing company proprietary data; included with "Other."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes other vanadium-iron-carbon alloys as well as vanadium oxides added directly to steel.

3/ Includes other vanadium alloys, vanadium metal, vanadium pentoxide, vanadates, chlorides, other specialty chemicals, and items indicated by symbol "W."

TABLE 2
U.S. CONSUMPTION OF VANADIUM, BY END USE 1/

(Kilograms, contained vanadium)

	1998	1999		
		June	July	Year to date
Steel:				
Carbon	1,650,000	90,400 r/	102,000	667,000
High-strength low-alloy	950,000	87,300 r/	84,900	584,000
Stainless and heat-resisting	42,400	5,460	4,030	46,200
Full alloy	891,000	68,700 r/	69,100	546,000
Tool	269,000	28,000	23,500	198,000
Total steel	3,800,000	280,000 r/	283,000	2,040,000
Superalloys	19,900	1,240	1,250	8,990
Miscellaneous and unspecified 2/	571,000	42,000 r/	34,500	272,000
Total consumption	4,390,000	323,000 r/	319,000	2,320,000

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes cast irons, alloys excluding steel and superalloys, chemical and ceramic uses, and other miscellaneous and unspecified uses.

TABLE 3
U. S. IMPORTS AND EXPORTS OF ALUMINUM-VANADIUM MASTER ALLOY AND
VANADIUM METAL, INCLUDING WASTE AND SCRAP 1/

(Kilograms, gross weight)

	Aluminum-vanadium master alloy		Vanadium metal, including waste and scrap	
	Quantity	Value	Quantity	Value
Imports for consumption:				
1998	298,000	\$496,000	12,200	\$491,000
1999:				
April	--	--	9,990	187,000
May	--	--	2,320	65,700
June:				
Argentina	1,110,000 2/	1,550,000 2/	--	--
Germany	--	--	14	7,680
Philippines	--	--	8	10,000
Total	1,110,000	1,550,000	22	17,700
Year to date	1,110,000	1,550,000	19,700	449,000
Exports:				
1998	856,000	11,500,000	346,000	7,160,000
1999:				
April	88,200	1,150,000	16	38,500
May	19,800	258,000	18,600	352,000
June:				
Canada	3,300	42,900	--	--
Israel	5,390	69,100	--	--
Korea, Republic of	--	--	12	5,910
United Kingdom	--	--	9,640	219,000
Total	8,700	112,000	9,650	225,000
Year to date	176,000	2,320,000	96,900	1,870,000

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ All or part of these data have been referred to the Bureau of the Census for verification.

Source: Bureau of the Census.

TABLE 4
U. S. IMPORTS AND EXPORTS OF FERROVANADIUM, VANADIUM PENTOXIDE (ANHYDRIDE) AND
OTHER OXIDES AND HYDROXIDES OF VANADIUM 1/

(Kilograms, contained vanadium)

	Ferrovanadium		Vanadium pentoxide (anhydride) 2/		Other oxides and hydroxides of vanadium	
	Quantity	Value	Quantity	Value	Quantity	Value
Imports for consumption:						
1998	1,620,000	\$39,300,000	847,000	\$12,300,000	33,000	\$574,000
1999:						
April	156,000	1,660,000	814	13,500	--	--
May	195,000	2,150,000	1,000	12,200	--	--
June:						
Austria	15,500	165,000	--	--	--	--
Canada	42,300	513,000	--	--	--	--
China	39,400	404,000	--	--	--	--
Germany	--	--	1,120	57,200	--	--
South Africa	81400	832000	--	--	--	--
Total	179,000	1,910,000	1,120	57,200	--	--
Year to date	791,000	9,710,000	30,500	422,000	--	--
Exports:						
1998	579,000	13,700,000	681,000	6,850,000	232,000	2,830,000
1999:						
April	24,900	356,000	42,600	245,000	5,650	65,700
May	16,700	228,000	121,000	635,000	5,900	77,700

See footnotes at end of table.

TABLE 4--Continued
U. S. IMPORTS AND EXPORTS OF FERROVANADIUM, VANADIUM PENTOXIDE (ANHYDRIDE) AND
OTHER OXIDES AND HYDROXIDES OF VANADIUM 1/

(Kilograms, contained vanadium)

	Ferrovanadium		Vanadium pentoxide (anhydride) 2/		Other oxides and hydroxides of vanadium	
	Quantity	Value	Quantity	Value	Quantity	Value
Exports--Continued:						
June:						
Belgium	--	--	87,600	\$378,000	--	--
Canada	3,610	\$54,100	--	--	20,700	\$157,000
Germany	--	--	15,200	70,500	--	--
Italy	--	--	15,000	82,900	--	--
Mexico	939	14,400	--	--	--	--
Total	4,550	68,500	118,000	532,000	20,700	157,000
Year to date p/ 3/	144,000	2,140,000	585,000	3,400,000	49,100	463,000

p/ Preliminary.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ May include catalysts containing vanadium pentoxide.

3/ May include revisions to previous months' data.

Source: Bureau of the Census.

TABLE 5
U. S. IMPORTS FOR CONSUMPTION OF VANADIUM-BEARING ASH, SLAG 1/

(Kilograms, contained vanadium pentoxide)

	Ash and residues		Ash and residues (not from the manufacture of iron and steel)		Slag, from the manufacture of iron and steel	
	Quantity	Value	Quantity	Value	Quantity	Value
Imports for consumption:						
1998	3,030,000	\$9,960,000	2,280,000	\$1,710,000	1,250,000	\$10,500,000
1999:						
April	292,000	942,000	202,000	115,000	--	--
May	287,000	242,000	234,000	112,000	--	--
June:						
Canada	--	--	240,000	112,000	--	--
Mexico	178,000	2,220,000	--	--	--	--
South Africa	--	--	--	--	290,000	405,000
Total	178,000	2,220,000	240,000	112,000	290,000	405,000
Year to date	1,270,000	5,300,000	1,120,000	575,000	569,000	963,000

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

TABLE 6
U. S. IMPORTS FOR CONSUMPTION OF MISCELLANEOUS VANADIUM CHEMICALS 1/

(Kilograms, contained vanadium)

	Sulfates		Vanadates	
	Quantity	Value	Quantity	Value
Imports for consumption:				
1998	350	\$19,300	129,000	\$1,410,000
1999:				
April	--	--	630	36,100
May	--	--	576	55,200
June:				
Germany	--	--	4,620	93,100
South Africa	--	--	12,000	103,000
Total	--	--	16,600	196,000
Year to date	--	--	57,900	677,000

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.